

Finding Equivalent Fractions

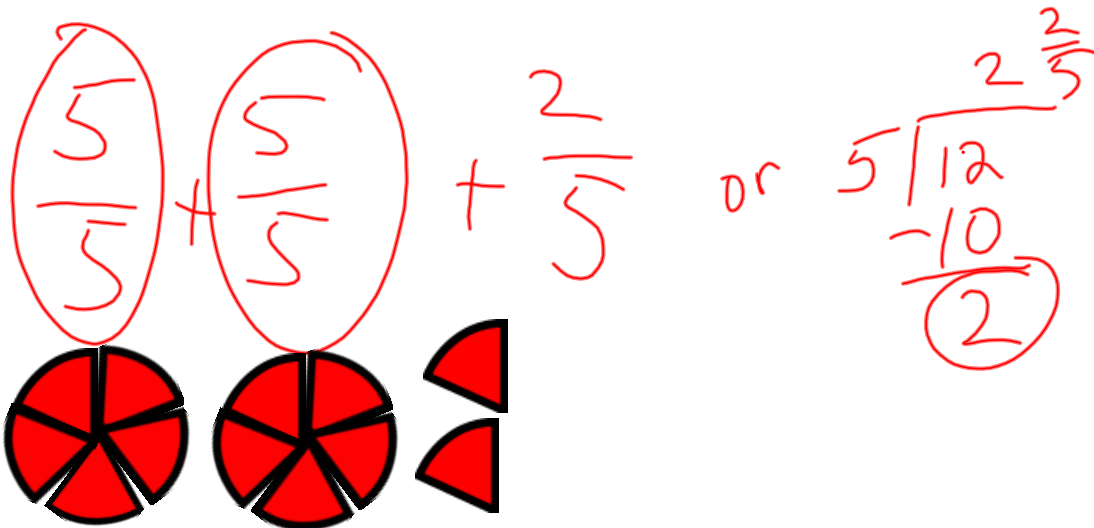
$$\frac{2}{3} = \frac{4}{6} \quad \frac{6}{9} \quad \frac{8}{12}$$

$$\frac{15}{20} = \frac{3}{4} \quad \frac{30}{40} \quad \frac{6}{8}$$

When finding an equivalent fraction, you can multiply the numerator and denominator by the same number OR, in some cases, you will be able to divide the numerator and denominator by the same number.

Converting an Improper Fraction to a Mixed Number

$$\frac{12}{5} = 2 \frac{2}{5}$$



When you have an improper fraction, such as $\frac{12}{5}$, think how many fifths does it take to make a whole? Since $\frac{5}{5}$ makes a whole, then $\frac{5}{5} + \frac{5}{5} + \frac{2}{5} = \frac{12}{5}$. Then equals 2 whole + $\frac{2}{5}$ or $2 \frac{2}{5}$. You can also just divide the denominator into the numerator. Your remainder over the divisor is the fraction part.

If the \square = 1 whole, write a mixed number for each.



$$\text{Mixed Number} = 1\frac{3}{4}$$
$$\text{Fraction} = \frac{7}{4}$$

$$1\frac{3}{4} = \frac{4}{4} + \frac{3}{4} = \frac{7}{4}$$

You can convert a mixed number to a fraction by multiplying the denominator by the whole number, adding that to the numerator over the original denominator (e.g., $1\frac{3}{4}$ --multiply 4×1 (which equals 4) + 3 (which equals 7). So that would be $7/4$).

Adding Fractions

$$\frac{1}{4} + \frac{3}{4} = \frac{4}{4} = 1$$

$$\boxed{\frac{2}{3} + \frac{1}{4}}$$

Need a common denominator

$$\begin{array}{r} \frac{2}{3} = \frac{8}{12} \\ + \frac{1}{4} = \frac{3}{12} \\ \hline \frac{11}{12} \end{array}$$

$$\boxed{\begin{array}{r} \frac{2}{5} = \frac{8}{20} \\ \frac{1}{20} = \frac{1}{20} \end{array}}$$

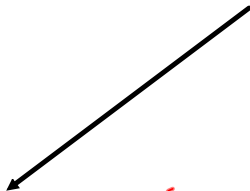
20 is a common denominator

You come up with a common denominator by asking the question, "What number will both denominators go into evenly without a remainder?"

For example, if you have $2/4 + 1/3$. You know that 4 and 3 will go into 12 evenly, so that would work. It could also be 24, 36, and so on. Typically, you try to find the LOWEST number that both will go into evenly. So, in this case, we'll use 12.

$$\begin{array}{r}
 \begin{array}{r}
 2 \times 3 \quad 6 \\
 \hline
 4 \times 3 \quad 12
 \end{array} \\
 + \\
 \begin{array}{r}
 1 \times 4 \quad 4 \\
 \hline
 3 \times 4 \quad 12
 \end{array} \\
 \hline
 \begin{array}{r}
 10 \\
 \hline
 12
 \end{array} =
 \end{array}$$

You can put an answer in lowest terms by dividing the numerator and the denominator by the largest number that will go into both of them. In this case, I divided both by 2.


 This is the answer in lowest terms.

40% adventure 10% mystery 10% humor
40% other

100 students took the survey
Then... 10 students liked mystery
If 10 students took the survey,
4 students liked adventure

You will be given a similar problem on the test. Remember, percent means "out of a 100." Use this to help you figure out the number of students who liked a particular genre. If 50% of 100 kids liked sports (as an example), then 50 kids liked sports books. Now you can figure out the results if 50 kids took the survey by cutting the original number (for 100 kids) in half. So 50% of 50 kids would be 25 kids.